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EXAMINER

SHENG, TOM V

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 07/30/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/978,306

Applicant(s)

O'KEEFE ET AL.

Examiner

Tom V Sheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because many of the figures are too dark to see clearly. Further, they appear to be based on photos. Real drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 2 is objected to because of the following informalities: the phrase "extending portion" should be --extending button-- to clearly follow from claim 1. Appropriate correction is required.

3. Claim 111 is objected to because of the following informalities: change claim number "111" to --11--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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As for claims 6 and 14, the common phrase "an inside surface of the **top housing**" for attaching the cantilever arm does not correspond to disclosure, which teaches that the internal keyplate 12 (formed of the cantilevered arms) is mounted on the (inside surface of) **top interior housing** 101. See figure 6 and paragraph 21 on page 4 of the disclosure.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Rockwell (US Patent 5270692).

As to claims 1 and 11, Rockwell teaches an input device (cursor/mouse 10; figures 5-7) comprising: a body of said device (bottom piece 16, board 18 and a front piece 20); electronic circuitry mounted in said body (printed circuit board 18 placed on the inside of the bottom piece 16); a top housing mounted over said body (top piece 14 over board 18 and bottom piece 16); a free extending button integrally formed with said top housing (integral bi-directional switch actuator arm 44 molded into top piece 14; note the gap around each arm); said extending button being depressible separately with respect to a remainder of said top housing (figure 7; when an actuator arm 44 is depressed on one end, it rotates slightly as a result of a twisting of the torsion bar 54

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under the vertical member 56 associated therewith); said top housing providing a cantilevered mounting of said extending button to said body of said device (figure 8; a torsion mounting strip 52 for resiliently support the switch actuator arms 44). See column 4, line 40 to column 5, line 62.

As to claim 10, the Rockwell's actuator arm can flex on either side of the mounting strip 52.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockwell.

As to claim 2, Rockwell's top piece 14 and integral actuator arms 44 are made of high impact plastic and thus do not read on claimed wherein the top housing and extending portion are metal.

However, it would have been obvious for one of ordinary skill in the art at the time the invention was made to use either plastic or metal since both can provide flexibility with the proper choice of material and design.

As to claim 7, Rockwell's top piece is secured to the bottom piece by means of screw and bores towards the end of the pieces.

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Rockwell does not teach claimed wherein said top housing curves around a back of said device and attaches to the back of said device.

However, it would have been obvious for one of ordinary skill in the art at the time the invention was made to also fashion the connection by screw and bores to the back of the cursor/mouse since the designation of point of attachment is just as effective either like Rockwell's or all the way to the back.

10. Claims 3-5, 8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockwell as applied to claim 1 above, and further in view of Bohn (US Patent 6525306 B1).

As for claims 3-5, Rockwell teaches the cursor/mouse 10 as analyzed in claim 1. Rockwell does not teach claimed an island mounted on said body adjacent said extending button, said island having a lip extending over an edge of said extending button so that a gap between said extending button and said island is not visible from above.

Bohn teaches a computer mouse with integral digital camera (figure 1). The housing 12 is provided with a pair of buttons 22, 24 and a scroll wheel 26. Rockwell further states that it is generally preferred, but not required, to provide with a scroll wheel 26 (a roller) due to increased functionality and ease of use when the computer accessory 10 (a mouse) is used with a computer system 30 and/or software that supports scroll wheels. See column 3, lines 23-26 and column 6, lines 30-41. Note, in

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order to fit the scroll wheel on the housing 12, an area between the two buttons 22, 24 are allocated where the wheel is to be placed.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide an island by removing Rockwell's middle button (keeping left and right buttons) and put in a scroll wheel with an island that are separate from the buttons because of the additional scrolling function providing increased ease of use. It is further not patentively distinct whether the island has a lip extending over an edge of the extending button, which is an appearance issue.

As to claim 8, Rockwell does not teach the limitation a resilient bumper mounted between said top housing and said body where top housing curves around a back of said device and attaches to said back of said device.

Bohn teaches that the housing 12's top surface 14 may comprise a curved surface shaped to comfortably receive the hand of the user (figure 1; column 6, lines 5-8). Bohn does not teach that a resilient bumper is mounted between the top housing and the body; however, this is obvious since adding a resilient bumper would provide a more comfortable grip. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Rockwell's top housing like Bohn because of a more comfortable hold and grip.

Claim 12 combines claims 1, 2, 3 and 4 and is accordingly per analyses of claims 1-4.

Claim 13 is rejected per analysis of claim 5.

Allowable Subject Matter

11. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6 and 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts of record teaches the limitations "a non-metallic interior housing mounted beneath said top housing between said top housing and electronic circuitry inside said device; wherein said top housing is metal, and said interior housing isolates said metal from said electronic circuitry" of claim 9.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bidiville et al. (US 6400356 B1) teaches a mouse with two depressible buttons and one depressible roller attached to a third button. The buttons are formed flush with the top housing but not an integral part of it (i.e. one piece).

Chiang et al. (US 6469693 B1) teaches a mouse with two depressible buttons and a mouse ball. The buttons are also not integrally formed with the top piece but are attached to by means of two U-shaped hinges.

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Wu (US 6292113 B1) teaches a rotating member used in a mouse that have a plurality of apertures for signal encoding purpose. The rotating member protrudes out of the top of the mouse and is depressible. However, the rotating member is supported by its shaft on both sides and is not supported in a cantilevered fashion.

Rodgers (US 2002/0118174 A1) teaches two or three buttons on a mouse that are mounted in a cantilever like fashion but the buttons are not integrally formed with the shell.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V Sheng whose telephone number is (703) 305-6708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TS
July 23, 2003

Lun-Yi Lao
Primary Examiner

